

WHAT IS CLAIMED IS:

1. An apparatus for an interior antiballistic armored panel for mounting on a structure, comprising:

a plurality of tracks mounted to the structure;

a second backer board attached to the plurality of tracks;

a layer of tiles attached to the second backer board;

a first backer board attached to the layer of tiles;

a second set of Aramid-Fiber sheets attached to the layer of tiles;

a first set of Aramid-Fiber sheets attached to the second set of Aramid-Fiber sheets;

a first panel with a second side attached to the first set of Aramid-Fiber sheets and with a top and bottom portion mounted to the plurality of tracks;

a plurality of lips mounted to the plurality of tracks; and

an interior surface attached to at least one of a first side of the first panel and the plurality of lips,

wherein at least one of self-tapping screws, fasteners and welding are used for mounting the plurality of tracks, first panel and the plurality of lips, and at least one of adhesives and tape are used for attaching the interior surface, first panel, Aramid-Fiber sheets, backer boards and layer of tiles.

2. The apparatus of claim 1, wherein the structure is at least one of a concrete floor, steel frame floor, ceilings, walls, columns and a vehicle.

3. The apparatus of claim 2, wherein the first panel is at least one of a polystyrene steel panel and a steel stud structural element.
4. The apparatus of claim 3, wherein the first panel has a thickness in a range from 3-1/2" to 7-1/2".
5. The apparatus of claim 4, wherein the first panel is insulated.
6. The apparatus of claim 5, wherein the first set of Aramid-Fibers and second set of Aramid-Fibers are each at least 4 layers thick.
7. The apparatus of claim 6, wherein the first backer board and second backer board are cementous backer boards.
8. The apparatus of claim 7, wherein the first backer board and second backer board are fireproof backer boards.
9. The apparatus of claim 8, wherein the first backer board and second backer board have a thickness in a range from 1/4" to 1/2".
10. The apparatus of claim 9, wherein the layer of tiles is made from individual tiles.
11. The apparatus of claim 10, wherein at least one of quarry tiles and paver tiles are used to form the layer of tiles.
12. The apparatus of claim 11, wherein the layer of tiles has a thickness from 1/4" to 1/2".
13. The apparatus of claim 12, wherein the exterior surface is made of gypsum board that has a thickness of 5/8".
14. The apparatus of claim 13, wherein the adhesives are at least one of polyurethane and urethane.

15. The apparatus of claim 13, wherein the tape is at least one of double-stick tape, double coated acrylic foam tape and adhesive transfer tape.

16. A method for making an interior antiballistic armored panel for mounting on a structure, comprising:

mounting a plurality of tracks on the structure;

attaching a second backer board to the plurality of tracks;

attaching a layer of tiles to the second backer board;

attaching a first backer board to the layer of tiles;

attaching a second set of Aramid-Fiber sheets to the first backer board;

attaching a first set of Aramid-Fiber sheets to the second set of Aramid Fiber sheets;

attaching a second side of a first panel to the first set of Aramid-Fiber sheets;
mounting a top and bottom of the first panel to the plurality of tracks;

mounting a plurality of lips to the plurality of tracks;

attaching an interior surface to first side of the first panel,

wherein at least one of self-tapping screws, fasteners and welding are used for mounting the plurality of tracks and the first panel, and at least one of adhesives and tape are used for attaching the interior surface, first panel, Aramid-Fiber sheets, backer boards and layer of tiles.

17. The method of claim 16, wherein the structure is at least one of a concrete floor, steel frame floor, ceilings, walls, columns and a vehicle.

18. The method of claim 17, wherein the first panel is at least one of a polystyrene steel panel and a steel stud structural element.
19. The method of claim 18, wherein the first panel has a thickness in the range from 3-1/2" to 7-1/2".
20. The method of claim 19, wherein the first panel is insulated.
21. The method of claim 20, wherein the first set of Aramid-Fibers and second set of Aramid-Fibers are each at least 4 layers thick.
22. The method of claim 21, wherein the first backer board and second backer board are cementous backer boards.
23. The method of claim 22, wherein the first backer board and second backer board are fireproof backer boards.
24. The method of claim 23, wherein the first backer board and second backer board have a thickness in a range from 1/4" to 1/2".
25. The method of claim 24, wherein the layer of tiles is made from individual tiles.
26. The method of claim 25, wherein at least one of quarry tiles and paver tiles are used to form the layer of tiles.
27. The method of claim 26, wherein the layer of tiles has a thickness from 1/4" to 1/2".
28. The method of claim 27, wherein the exterior surface is made of gypsum board that has a thickness of 5/8".
29. The method of claim 28, wherein the adhesives are at least one of polyurethane and urethane.

30. The method of claim 28, wherein the tape is at least one of double-stick tape, double coated acrylic foam tape and adhesive transfer tape.

31. An apparatus for an antiballistic armored panel for mounting on a structure, comprising:

a plurality of tracks mounted to the structure;

a first panel mounted at a top and bottom portion to the plurality of tracks;

a first set of Aramid-Fiber sheets attached to a second side of the first panel;

a second set of Aramid-Fiber sheets attached to the first set of Aramid-Fiber sheets;

a first backer board attached to the second set of Aramid-Fiber sheets;

a layer of tiles attached to the first backer board;

a second backer board attached to the layer of tiles;

a second panel attached on a first side to the second backer board and mounted at a top and bottom portion to the plurality of tracks;

a plurality of lips mounted to the plurality of tracks;

an exterior surface attached to a second side of the second panel; and

an interior surface attached to a first side of the first panel,

wherein at least one of self-tapping screws, fasteners and welding are used for mounting the plurality of tracks, first panel, second panel and plurality of lips, and at least one of adhesives and tape are used for attaching the Aramid-Fiber sheets, backer boards, layer of tiles, exterior surface and interior surface.

32. The apparatus of claim 31, wherein the structure is at least one of a concrete floor, steel frame floor, ceilings, walls, columns and a vehicle.

33. The apparatus of claim 32, wherein the first panel and second panel are at least one of a polystyrene steel panel and a steel stud structural element.

34. The apparatus of claim 33, wherein the first panel has a thickness in the range from 3-1/2" to 7-1/2".

35. The apparatus of claim 34, wherein at least one of the first panel and second panel is insulated.

36. The apparatus of claim 35, wherein the first set of Aramid-Fibers and second set of Aramid-Fibers are each at least 4 layers thick.

37. The apparatus of claim 36, wherein the first backer board and second backer board are cementous backer boards.

38. The apparatus of claim 37, wherein the first backer board and second backer board are fireproof backer boards.

39. The apparatus of claim 38, wherein the first backer board and second backer board have a thickness in a range from 1/4" to 1/2".

40. The apparatus of claim 39, wherein the layer of tiles is made from individual tiles.

41. The apparatus of claim 40, wherein at least one of quarry tiles and paver tiles are used to form the layer of tiles.

42. The apparatus of claim 41, wherein the layer of tiles has a thickness from 1/4" to 1/2".

43. The apparatus of claim 42, wherein the interior surface and the exterior surface are made of gypsum board that has a thickness of 5/8".

44. The apparatus of claim 43, wherein the adhesives are at least one of polyurethane and urethane.

45. The apparatus of claim 43, wherein the tape is at least one of double-stick tape, double coated acrylic foam tape and adhesive transfer tape.

46. A method for making an antiballistic armored panel for mounting on a structure, comprising:

mounting a plurality of tracks on the surface;

mounting a top and bottom portion of a first panel to the plurality of tracks;

attaching a first set of Aramid-Fiber sheets to a second side of the first panel;

attaching a second set of Aramid-Fiber sheets to the first set of Aramid Fiber sheets;

attaching a first backer board to the second set of Aramid-Fiber sheets;

attaching a layer of tile to the first backer board;

attaching a second backer board to the layer of tiles;

attaching a second panel to the second backer board;

mounting a top and bottom of the second panel to the plurality of tracks;

mounting a plurality of lips to the plurality of tracks;

attaching an exterior surface to a second side of the second panel;

finishing the exterior surface with at least one of brick, stone and other external finishing materials; and

attaching an interior surface to the first side of the first panel,

wherein at least one of self-tapping screws, fasteners and welding are used for mounting the plurality of tracks, first panel, second panel and the plurality of lips, and at least one of adhesives and tape are used for attaching the Aramid-Fiber sheets, backer boards, layer of tiles, exterior surface and interior surface.

47. The method of claim 46, wherein the structure is at least one of a concrete floor, steel frame floor, ceilings, walls, columns and a vehicle.

48. The method of claim 47, wherein the first panel and second panel are at least one of a polystyrene steel panel and a steel stud structural element.

49. The method of claim 48, wherein the first panel has a thickness in the range from 3-1/2" to 7-1/2".

50. The method of claim 49, wherein at least one of the first panel and second panel is insulated.

51. The method of claim 50, wherein the first set of Aramid-Fibers and second set of Aramid-Fibers are each at least 4 layers thick.

52. The method of claim 51, wherein the first backer board and second backer board are cementous backer boards.

53. The method of claim 52, wherein the first backer board and second backer board are fireproof backer boards.

54. The method of claim 53, wherein the first backer board and second backer board have a thickness in a range from 1/4" to 1/2".

55. The method of claim 54, wherein the layer of tiles is made from individual tiles.

56. The method of claim 55, wherein at least one of quarry tiles and paver tiles are used to form the layer of tiles.

57. The method of claim 56, wherein the layer of tiles has a thickness from $\frac{1}{4}$ " to $\frac{1}{2}$ ".

58. The method of claim 57, wherein the interior surface and the exterior surface are made of gypsum board that has a thickness of $\frac{5}{8}$ ".

59. The method of claim 58, wherein the adhesives are at least one of polyurethane and urethane.

60. The method of claim 58, wherein the tape is at least one of double-stick tape, double coated acrylic foam tape and adhesive transfer tape.

61. An apparatus for an antiballistic/anti-forced entry armored panel for mounting on a structure, comprising:

a plurality of tracks mounted to the structure;

a first panel attached at a top and bottom portion to the plurality of tracks;

a first set of Aramid-Fiber sheets attached to a first side of the first panel;

a second set of Aramid-Fiber sheets attached to the first set of Aramid-Fiber sheets;

a first backer board attached to the second set of Aramid-Fiber sheets;

a layer of tiles attached to the first backer board;

a second backer board attached to the layer of tiles;

a second panel attached to the second backer board and mounted at the top and bottom to the plurality of tracks;

a hardened steel mesh attached to the second panel by at least one of seaming and continuous welding;

horizontal steel frame members attached to the hardened steel mesh by welding;

at least one of horizontal rebars, spacers and fasteners attached to the hardened steel mesh by tack welding, located at least at the top and bottom of the second panel and at equally spaced at intervals between the top and bottom of the second panel;

a stucco mesh attached to the at least one of horizontal rebars, spacers and fasteners by welding;

a plurality of lips mounted to the plurality of tracks and spaced at intervals along edges of the stucco mesh;

high strength stucco applied to the stucco mesh; and

an interior surface attached to a first side of the first panel,

wherein at least one of self-tapping screws, fasteners and welding are used for mounting the plurality of tracks, first panel, second panel and plurality of lips, and at least one of adhesives and tape are used for attaching the Aramid-Fiber sheets, backer boards, layer of tiles and interior surface.

62. The apparatus of claim 61, wherein the structure is at least one of a concrete floor, steel frame floor, ceilings, walls, columns and a vehicle.

63. The apparatus of claim 62, wherein the first panel and second panel are at least one of a polystyrene steel panel and a steel stud structural element.

64. The apparatus of claim 63, wherein the first panel has a thickness in the range from 3-1/2" to 7-1/2".

65. The apparatus of claim 64, wherein at least one of the first panel and second panel is insulated.

66. The apparatus of claim 65, wherein the first set of Aramid-Fibers and second set of Aramid-Fibers are each at least 4 layers thick.

67. The apparatus of claim 66, wherein the first backer board and second backer board are cementous backer boards.

68. The apparatus of claim 67, wherein the first backer board and second backer board are fireproof backer boards.

69. The apparatus of claim 68, wherein the first backer board and second backer board have a thickness in a range from $\frac{1}{4}$ " to $\frac{1}{2}$ ".

70. The apparatus of claim 69, wherein the layer of tiles is made from individual tiles.

71. The apparatus of claim 70, wherein at least one of quarry tiles and paver tiles are used to form the layer of tiles.

72. The apparatus of claim 71, wherein the layer of tiles has a thickness from $\frac{1}{4}$ " to $\frac{1}{2}$ ".

73. The apparatus of claim 72, wherein the exterior surface is made of gypsum board that has a thickness of $\frac{5}{8}$ ".

74. The apparatus of claim 73, wherein the adhesives are at least one of polyurethane and urethane.

75. The apparatus of claim 73, wherein the tape is at least one of double-stick tape, double coated acrylic foam tape and adhesive transfer tape.

76. A method for making an antiballistic and anti-forced entry armored panel for mounting on a structure, comprising:

mounting a plurality of tracks on the structure;

mounting a top and bottom of a first panel to the plurality of tracks;

attaching a first set of Aramid-Fiber sheets to the first panel;

attaching a second set of Aramid-Fiber sheets to the first set of Aramid Fiber sheets;

attaching a first backer board to the second set of Aramid-Fiber sheets;

attaching a layer of tile to the first backer board;

attaching a second backer board to the layer of tiles;

attaching a second panel to the second backer board;

mounting a top and bottom portion of the second panel to the plurality of tracks;

at least one of seaming and continuous welding a hardened steel mesh to the second panel;

welding horizontal steel frame members to the hardened steel mesh;

tack welding at least one of horizontal rebars, spacers and fasteners at least at the top and bottom of the second panel and at equally spaced intervals between the top and bottom of the second panel;

tack welding stucco mesh to the at least one of horizontal rebars, spacers and fasteners;

mounting a plurality of lips at intervals spaced along edges of the stucco mesh to the plurality of tracks;

applying high strength stucco to the stucco mesh to form an exterior surface;
and

attaching an interior surface to a first side of the first panel,

wherein at least one of self-tapping screws, fasteners and welding are used for mounting the plurality of tracks, first panel, second panel and plurality of tracks, and at least one of adhesives and tape are used for attaching the Aramid-Fiber sheets, backer boards, layer of tiles and interior surface.

77. The method of claim 76, wherein the structure is at least one of a concrete floor, steel frame floor, ceilings, walls, columns and a vehicle.

78. The method of claim 77, wherein the first panel and the second panel are at least one of a polystyrene steel panel and a steel stud structural element.

79. The method of claim 78, wherein the first panel has a thickness in the range from 3-1/2" to 7-1/2".

80. The method of claim 79, wherein the first panel and second panel are insulated.

81. The method of claim 80, wherein the first set of Aramid-Fibers and second set of Aramid-Fibers are each at least 4 layers thick.

82. The method of claim 81, wherein the first backer board and second backer board are cementous backer boards.

83. The method of claim 82, wherein the first backer board and second backer board are fireproof backer boards.

84. The method of claim 83, wherein the first backer board and second backer board have a thickness in a range from 1/4" to 1/2".

85. The method of claim 84, wherein the layer of tiles is made from individual tiles.
86. The method of claim 85, wherein at least one of quarry tiles and paver tiles are used to form the layer of tiles.
87. The method of claim 86, wherein the layer of tiles has a thickness from $\frac{1}{4}$ " to $\frac{1}{2}$ ".
88. The method of claim 87, wherein the exterior surface is made of gypsum board that has a thickness of $\frac{5}{8}$ ".
89. The method of claim 88, wherein the adhesives are at least one of polyurethane and urethane.
90. The method of claim 88, wherein the tape is at least one of double-stick tape, double coated acrylic foam tape and adhesive transfer tape.
91. An antiballistic armored panel capable of achieving up to UL Level 8, said panel comprising one or more of the following materials: gypsum board, a structural pre-insulated light gauge steel component, a commercial grade adhesive and/or tape, cementeous board, commercial grade quarry tiles, tempest mesh Aramid-Fiber sheets and/or KEVLAR®, and wherein said panel comprises less than 25% by weight of reinforced concrete and less than 25% by weight of ballistic steel.
92. The antiballistic armored panel of claim 91, wherein said panel comprises less than 5% by weight of reinforced concrete and less than 5% by weight of ballistic steel.
93. The antiballistic armored panel of claim 91, wherein said panel is free of reinforced concrete and ballistic steel.